The views of Europaforum Northern Sweden on Smart Cities and Smart Regions

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Europaforum Northern Sweden (EFNS) is a partnership and network for councillors at local and regional level covering the four northernmost regions in Sweden; Norrbotten, Västerbotten, Västernorrland and Jämtland, representing half the geographical area of Sweden.

Our objective is to increase knowledge and awareness of policies at EU level, and especially to increase involvement in shaping EU policies on matters regarding northern Sweden.

Our opinions represent the positions of elected officials and the comments have been formed in close cooperation between the regions.

According to the general position paper that EFNS adopted on 30 March 2012, focused on Horizon 2020 – the region has strong specific research and business areas of strategic importance for both EFNS and NSPA (Northern Sparsely Populated Areas in northern Europe - Norway, Sweden and Finland), and the rest of Europe in a broader context. The region also interworks closely within the Barents Region, which includes northern Russia.

The EFNS region – like NSPA – has many similar conditions, such as large geographical area and therefore long distances, as well as a cold climate. The region has a mere 4.9 inhabitants per km2, unparalleled by any other EU region.

The NSPA network comprises 14 regions and collaborates on the European arena to influence and to constitute a platform for "Best Practice" in different fields. One field is:

Smart (Sparsely Populated) Regions

There are sparsely populated regions both in other parts of Europe and in the rest of the world – for example the Arctic region including the Barents Region (northern Norway, Sweden, Finland and Russia), Africa, Asia, Australia, North and South America – and have the same need of enabling ICT (Information and Communication Technology) for e-services and e-inclusion, to support regional development and growth. For the region's and Europe's competitiveness, enabling ICT – products and services – can then also provide a base for commercialisation and business relations with a large international market.

Within Horizon 2020 – primarily within Societal Challenges – the EFNS and NSPA region can form a European "demonstration and pilot environment" (according to H2020), for innovations and enabling ICT in sparsely populated regions, in areas such as:

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- Health, demography and well-being.
- Food security, sustainable agriculture and bio-economy.
- Secure, clean and efficient energy.
- Smart, green and integrated transport.
- Climate action, resource efficiency and raw materials.
- Inclusive and innovative societies.

In the budget proposal for H2020, priority is also given to "*expenditure with a direct effect on growth – and large-scale pilot and demonstration projects for important technology*".

Smart Cities and Smart Regions

European programmes and platforms for Smart Cities focus strongly on continued urbanisation = big towns. "*it is against the background of urbanisation the European Commission has launched an innovation partnership aimed at producing new smart technologies that can solved many of the problems that arise when towns grow larger. The initiative was launched in 2011 with a budget of 81 mEUR and for 2013 the Commission has earmarked 365 mEUR for the demonstration projects*".

The EFNS region has few, relatively small towns. Most of the region is sparsely populated, but has needs for smart, inclusive services and products for citizens, the community and companies, services and products developed from "user involvement", where creative services are an important component in developing sustainable development with sustained growth. With today's migration to urban areas – both to the region's large towns and to the towns of southern Sweden, leaving an ageing population – equal access to IT infrastructure and inclusive e-services in low density areas and e.g. products adapted for a cold climate – are a precondition for young people to want to and to be able to live and work in and from smaller communities, and thereby a precondition for increased in-migration and growth in sparsely populated areas. The same conditions apply in many sparsely populated European regions but the demographic challenge is particularly great in regions such as EFNS and NSPA, geographically large, extremely sparsely populated and with imbalance in both the gender distribution and age pyramid, and a Sámi population with particular ICT needs in for example the reindeer industry.

e-health gives one concrete example. The geographical distance for an elderly person wishing to consult a specialist at the university hospital can entail a journey of 1,400 km. (Karesuando-Umeå). Due to in many cases poor/infrequent public transport (primarily by coach, sometimes in combination with train) this can mean a three-day journey with overnight stops. Distance-spanning technology and smart (adapted to the elderly) e-health services then mean both higher life quality for the patient and considerable savings for the community. Also follow-up, and certain treatments and rehabilitation – through interworking with e.g. district nurses and district physiotherapists – can then be provided remotely. In the EFNS – also in the NSPA – region, there are today many smart e-health services – implemented and at the European cutting-edge.

There is a similar need for smart e-services in for example e-commerce and innovation (where companies in sparsely populated areas can then operate on the global arena and collaborate in international, virtual projects and productions, e.g. in creative industries such as film production), e-governance (where public bodies are situated in coastal towns or the main community of the municipality), distance education (where universities in the region offer a large selection) and for the needs of e.g. the growing tourist industry.

It is also important that all citizens are able to use smart services to strengthen the involvement of the local level in regional development and multi-tier governance and create added value through the involvement of public and private players in the innovation process.

EU2020 points out the way for the growth work of the EU, and can be summed up in the watchwords *smart growth*, *sustainable growth* and *inclusive growth*. The OECD recommends that the regional growth strategies be given a stronger role with a clear focus on implementation. Smart Regions then represent a possibility for *sustainable growth* and *inclusive growth* also in sparsely populated regions.

The sparsely populated regions of Europe have often – like EFNS and NSPA – access to the Structural Funds, and the possibility to prioritise Smart Regions as a Smart Regional Specialisation, and thereby build capacity for synergies with Horizon 2020.

The Digital Agenda

The "Digital Agenda" for Europe has special relevance to the sparsely populated regions, and is one of seven flagship initiatives within the framework of the Europe 2020 Strategy.

"Successful implementation of this agenda will lead to innovation and economic growth and improve everyday life for both citizens and companies. More extensive and efficient use of digital technology will thereby help Europe to manage important challenges and give citizens better life conditions, through for example better medical and healthcare, more reliable and efficient transport solutions, a cleaner environment, new media options and easier access to public-sector services and cultural content".

That the Digital Agenda then should include – equally –Europe's sparsely populated is a crucial pre-condition for the competitiveness and growth of both Europe and the sparsely populated regions. Therefore, continued investments in IT infrastructure must be secured via regional, national and European initiatives and programmes.

In "Digital Agenda Scoreboard 2012" (working document 18.6.2012) it is written e.g.: "In today's technological environment, any structural change must necessarily include a strong dose of digitisation. Europe's companies cannot remain competitive, nor can public services remain first-class, if they do not make extensive use of information and communication technology (ICT) --- Promoting ICT is promoting a job-rich recovery. --

Sweden "is the most effective (nation) at using the Internet to improve people's lives, ahead of the United States and Britain, according to a global survey launched by Tim Berners-Lee, the inventor of the World Wide Web. Matt Cowan reports. (5 September 2012).

The EFNS region – partly thanks to the Structural Funds – already today has what is for the sparsely populated regions in Europe and the world good IT infrastructure and a high usage of ICT services and products by citizens, communities and companies, and a large number of innovative micro-companies and SMEs in areas such as ICT, energy, transport and creative industries. The region also participates and coordinates many EU projects – regionally, nationally, interregionally and within EU Framework Programmes as FP7 – with relevance to Smart Regions (see annex).

EFNS's proposals

- That a European innovation partnership be set up for Europe's sparsely populated regions (corresponding to that for large cities), focused on smart technologies, services and products and inclusion in the e-community. This can also contribute to creating conditions for increased in-migration and thereby growth and competitiveness for sparsely populated regions, both in Europe and internationally.

- That the EFNS region be given Commission support in the work to coordinate interworking with other European sparsely populated regions, to develop a European "demonstration and pilot environment" for innovative applications with direct relevance to sparsely populated regions both in Europe and internationally. The work of the partnership can also be coordinated with regional and national programmes and Structural Funds, and strategies such as Smart Specialisation, to achieve synergies with calls for proposals in Horizon 2020 and the Digital Agenda.

Annex: Examples of projects and implementations in the EFNS region

The regional, interregional and national arena

Objective 2: The SATIN project with the aim to enable end users to create "their own" mobile services, without prior programming competence. The aim will be met by developing tools, business models, and new architecture for mobile service creation. Special care and measures will be taken to increase the share of women engaged in the region's IT industry. The project focuses on three areas: - Technical platform, - Business aspects - User participation. The horizontal aspects equal opportunity, environment and diversity are also addressed.

Northern Periphery Programme: [Competitive Health Services: eHealth Solutions across the Northern Periphery](). Competitive Health Services project aimed to enhance provision and accessibility of health services in the sparsely populated regions of the Northern Periphery by developing and implementing innovative eHealth solutions.

VINNOVA: HAWC International AB (SME) has produced the world's first on-demand platform for professional film post-production via remote access. The research in the project focuses on the development of scalability and elasticity to develop the platform into a full-scale cloud service, internationally accessible regardless of the user's location. A rural company is thus breaking into the international market thanks to innovative technical solutions.

CiiR: Center for Interorganisational Innovation Research: The national excellence centre **CiiR** has been set up with the support of VINNOVA, regional players and the university. **CiiR's** work – together with international expertise and closely interworking with policymakers at different levels – consists of assembling new knowledge on the development of innovation systems, with particular focus on non-metropolitan areas and the opportunities brought by ICT and digital innovations.

The EU arena

AAL: Agent-Supported Assessment for Adaptive and Personalised Ambient Assisted Living - ASAPAL. Existing approaches to ambient assisted living (AAL) often fail to consider a human agent's needs from a holistic perspective. In particular the regular assessment of their changing abilities, skills and limitations is often treated as a separate matter in health care, thereby affecting the possibilities to provide support tailored to their current condition. Therefore, the objective of this project is to integrate assessment done by the health care professional into the framework of AAL.

FP7: Fireball: Smart Cities as Innovation Ecosystems for Future Internet Research". Empowered by Smart Citizens!

FP7: "SpaceBook" is a speech-driven, hands-free, eyes-free device for pedestrian navigation and exploration. SpaceBook will be developed as open source and progress will be bench-marked through controlled task-based experiments with real users. SpaceBook will generate concrete technical and scientific advances for eyes-free, hands-free navigation and exploration systems which will support for example applications in tourism.

EIT: EIT ICT Labs, "The EIT's Knowledge and Innovation Community with a focus on future Information and Communication Society. It breeds entrepreneurial ICT top talent by transforming higher education towards promoting innovation and entrepreneurial spirit. The KIC's Co-location Centres and mobility programmes help bring together people from different countries, disciplines and organisations"

SME

There are in the region many successful and competitive – nationally and internationally – SMEs working in ICT.

One example in the creative industry is **North Kingdom** (http://www.northkingdom.com/) which among its clients has some of the world's biggest companies, and works in and with international and virtual production teams.

"We are a digital creative agency from Sweden. Our headquarters and heritage are in the far north, a small town called Skellefteå next to the Arctic Circle. Through years of innovation and exploration in the digital medium, we've held on to what we feel is important – creative freedom, quality of work and curiosity – always with our feet on the ground and in high spirits. We like to see ourselves as a small, flexible, fast-moving team with big ideas. We have friends and partners all over the world to help us make those ideas come alive"

An example from the public sector is **DigiDaily,** which in a small rural community (Fränsta) in Västernorrland County has built up a world-leading production facility for digitising different types of paper-based production. DigiDaily digitises daily newspapers with the cooperation of among others the National Library of Sweden and the university, and that presupposes a good IT infrastructure and communications for shipping the finished material.